

Real Time Clock Module (I²C-BUS)

YSN8130

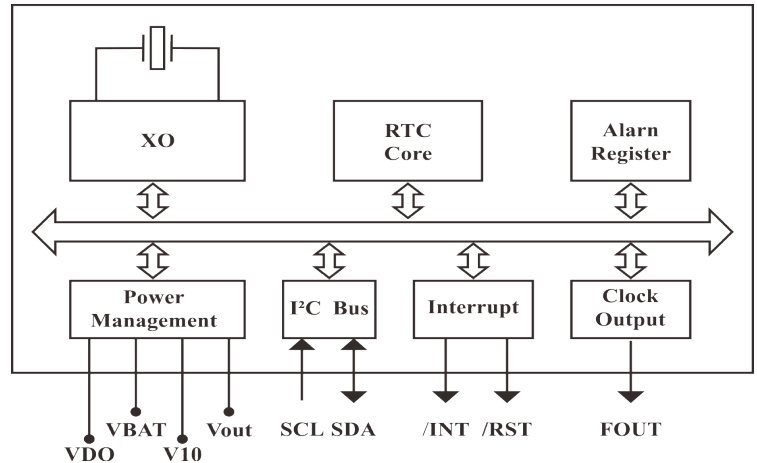
Built-in backup
battery charge control function

YSN8130E(SMD 3225)

Overview

- Low current consumption: 0.9uA(Typ.)
- High stability: $<5\pm 23\text{ppm @ }+25$
- Build-in XO: 32.768KHz
- Communication interface: I2C bus
- Power supply voltage: 1.6V~5.5V
- Operation temperature range: $-40 \sim +85$
- Leap years autocorrection
- Timer output function with adjustable period
- Package: $3.2\text{mm} \times 2.5\text{mm} \times 1.0\text{mm}$
- Digital offset function
- RoHS2.0, REACH& Halogen-free compliant

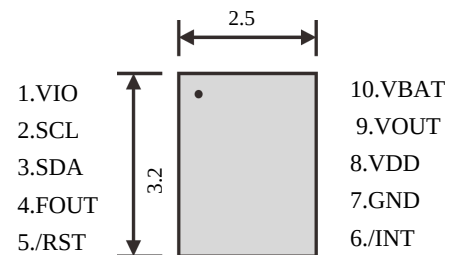
Block diagram



Pin Fuction

Pin	PinName	I/O	Description
1	V _{IO}	-	Interface power supply pin.
2	SCL	In	I ² C clock signal
3	SDA	In/Out	I ² C data signal
4	FOUT	Out	Frequency output. Frequency can be set by FSEL bits.
5	/RST	Out	Reset signal output. After the VDD pressure drop is detected, the pin outputs a negative pulse.
6	/INT	Out	Timing event interrupt output. Open-Drain
7	GND	-	Ground
8	VDD	-	Power supply
9	V _{OUT}	Out	Internal voltage output pin. Connect capacitor of 1.0uF to Ground
10	V _{BAT}	-	Backup battery pin. VBAT cannot floating, connect to large-capacity capacitors or a backup battery. Connect to VDD when switchover function is not necessary.

Terminal Connection



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Specifications (Characteristics)

Parameter	Symbol	Value			Unit	Remarks
		Min.	Typ.	Max.		
Power Supply Voltage(normal mode)	VDD	1.2	3.0	5.5	V	/
Interface Voltage(normal mode)	V _{IO}	1.6	3.0	5.5	V	If INIEN=1, VDD<V _{DET} , the interface is disable
Backup Battery	V _{BAT}	1.2	3.0	5.5	V	/
Operation Temperature	TOPR	-40	25	125	°C	/
Frequency stability	$\Delta f/f$	5±23			PPM	@25°C, VDD=3.0V:
	$\Delta f/f$	-120		10	PPM	VDD=3.0V; -20°C~+70°C; Reference frequency@ 25°C
Oscillation start time	t _{STA}			1	S	@25°C
Year Aging	fa			±5	PPM	First year@25°C
Average Current1	IDD1		0.9	5.6	μA	SCL=SDA='H', FOUT=OFF, /INT=OFF, VDD=VIO=3.0V, CHGEN=0b or VBAT ≥ VDET3, -40°C~85°C

SHENZHEN YANGXING TECHNOLOGY CO., LTD.

Address: 19th Floor, 1st Huide Building, Mintang Rd No.385, Longhua District, Shenzhen, China

Email: sales@yxcxal.com

Whatsapp: +86 181 2376 0094

Phone: +86 181 2376 0094